xantech®

HDMI4X4

USER MANUAL

CONTENTS

INTRODUCTION

The 4X4 HDMI™ Matrix routes high definition video in multiple resolutions up to 1080p plus multichannel digital audio from any of the four HDMI™ sources to the displays. Four outputs gives you the choice of sending high definition audio and video signals up to four displays. Any four sources to any four dislay devices matrix switching allows for maximum versatility for integrated systems. The 4X4 HDMI Switcher eliminates the need to disconnect and reconnect sources to a display equipped with one input. It works with Blu-ray players, TiVo systems, HT PCs, and satellite set top boxes that connect to an HDMI display. Every source is accessible at all times by any display by selecting it with an IR remote.

Note: Switching is done by using either the RMT-16IR remote control or through the RS-232 port. The 4X4 HDMI Matrix is rack mountable.

FEATURES

The 4X4 HDMI™ Matrix has the following main features:

• Allows any HDMI display to view any source at any time

• Allows any source to be displayed on multiple displays at the same time

• Maintains resolutions up to 1080p, 2k, and 1920x1200

• Maintains highest single link video and digital audio signals possible

• Supports HDCP compliant devices

• DVI to HDMI cables can allow transmission of DVI computer video

• Each source can be switched via IR remote control or through RS-232

INCLUDED IN THE PACKAGE

(1) 4X4 HDMI Matrix Switcher
(4) 6-foot HDMI Cables (M-M)
(1) 24VDC Power Supply
(1) User's Manual
(1) RMT-16IR Remote Control

(1) Rack Ears

FRONT PANEL LAYOUT
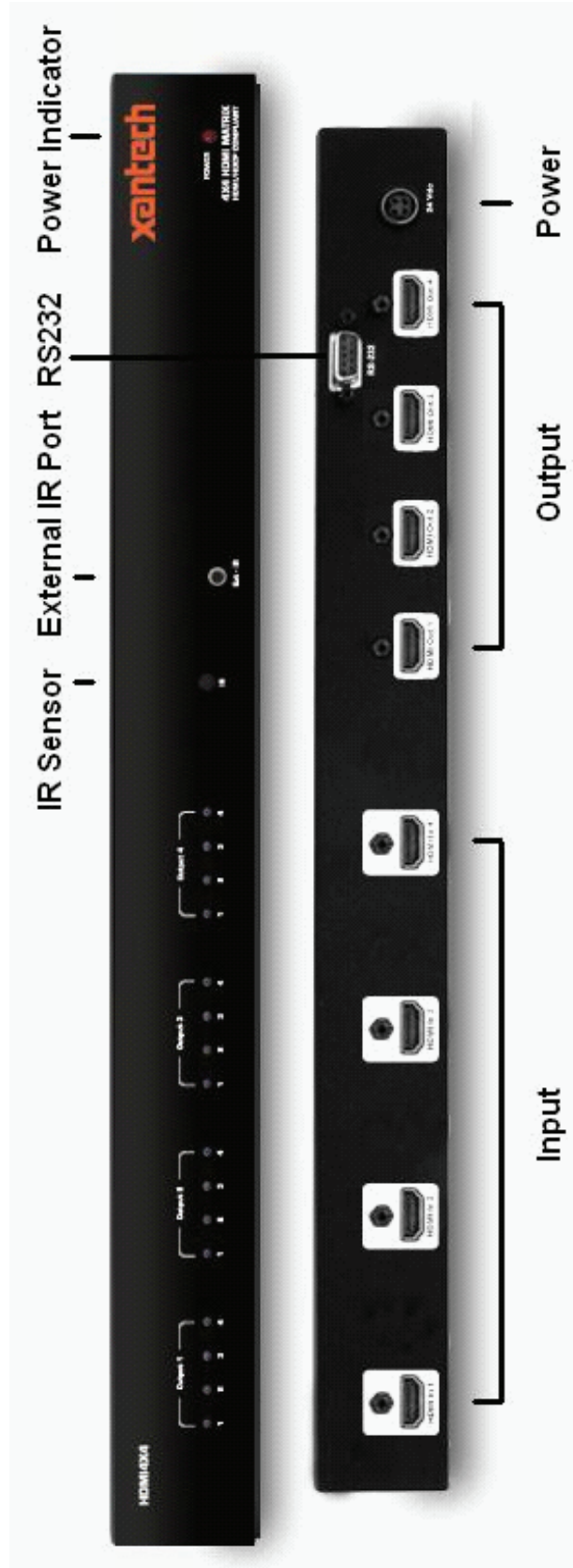
OPERATION NOTES

PLEASE READ THESE NOTES BEFORE INSTALLING OR OPERATING THE HDMI4X4 MATRIX SWITCHER

- The 4X4 HDMI Matrix is housed in a metal box for better RF shielding.
- The 4X4 HDMI Matrix works with all DVI and HDMI displays.
- The 4X4 HDMI Matrix supports both AUDIO and VIDEO signals.
- The 4X4 HDMI Matrix is fully HDCP compliant.

VIDEO COMPATIBILITY NOTE

An HDMI source connects to the HDMI4X4 Matrix Switcher with four input cables and four output cables. Output devices are examined to obtain an EDID, or a data record of the performance characteristics of the display devices. The default behavior of this 4X4 HDMI Matrix is to generate an EDID based on the common audio and video features of all connected output display devices. (Please see EDID Mode 6 on Page 5). For example, the display with the lowest native resolution will set the video resolution for all connected display devices.

INSTALLATION INSTRUCTIONS

Connect all HDMI/DVI input sources to the HDMI input jacks on the 4X4 HDMI Matrix, using supplied cables (a DVI source may be connected using a DVI-to-HDMI adapter cable, sold separately). Connect the HDMI/DVI displays to the HDMI output jacks on the 4X4 HDMI Matrix. Connect the 24VDC power tip to the 4X4 HDMI Matrix and plug the AC power cord to a free wall socket. Beautiful, vibrant HD video and multichannel digital audio (if using HDMI) will now be present at the HD display device.

Controlling the 4X4 HDMI Matrix using the RMT16-IR is done as follows:

Press Buttons	To Obtain Switch Behavior
1 to 4	OUTPUT 1: View Source 1, 2, 3, 4
5 to 8	OUTPUT 2: View Source 1, 2, 3, 4
9 to 12	OUTPUT 3: View Source 1, 2, 3, 4
13 to 16	OUTPUT 4: View Source 1, 2, 3, 4

RMT16-IR INSTALLATION

1. Remove battery cover from the back of the RMT16-IR remote.

2. Verify that DIP switches 1 & 2 are in the down (OFF) position.

3. Insert the battery; hold the battery so that you can see the positive side facing up. The side that is not marked must be facing down.

4. Test the RMT16-IR remote by pressing ONLY one button at a time. The indicator light on the remote will flash once each time you press a button. WARNING: Do not press multiple buttons simultaneously and do NOT press buttons rapidly. These actions will cause the remote to reset and steps 1-4 will have to be repeated.

5. Note: The RMT16-IR ships with two batteries. One battery is required for operation, the second battery is complimentary.

CUSTOM EDID CONFIGURATION VIA DIP SWITCHES

Extended display identification data (EDID) is a data structure provided by a display to describe its capabilities to any source that asks for it. The EDID includes manufacturer name, product type, timings supported by the display, display size, luminance data, (for digital displays only) pixel mapping data, supported audio channels and formats. This information is used by the source to cater its output to resolutions and audio formats that are supported by the display.

When displays are not properly recognized by HD source equipment, or when custom display configurations are desired, you can manually adjust the EDID parameters to achieve results using a bank of small switches inside the Xantech Splitter known as DIP (Dual In-Line Package) switches.

To access the DIP switches, remove all screws from the bottom and sides of the Xantech unit's metal chassis. Carefully slide the unit apart. The bank of 8 DIP switches is located on the main printed circuit board (PCB). Switches can be moved by a small screwdriver or other pointed object. Once adjustments are complete, slide the unit back together and replace all removed screws.

Additional EDID modes beyond the standard built-in modes are available and configured using a combination of DIP switches 1, 2, 5 and 7. Please refer to the following page for a list of the different EDID modes. The picture immediately below shows what a DIP switch bank looks like:
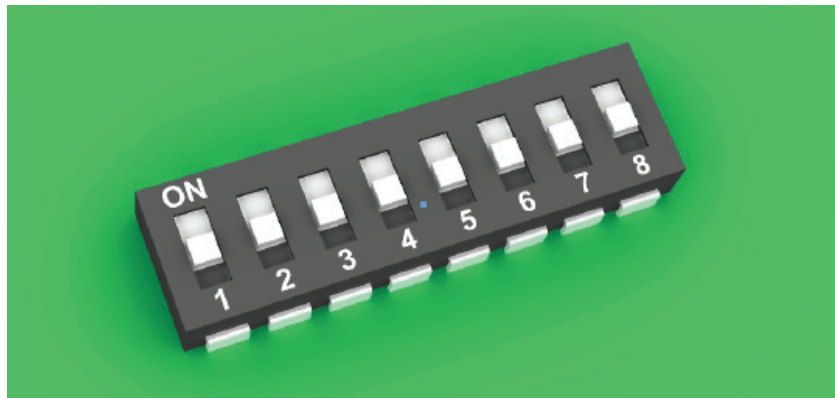
SETTING EDID MODES USING THE DIP SWITCH BANK:

EDID Mode 0 (Switch 1=OFF Switch2=OFF Switch5=ON) -EDID is copied from the device connected to the first active HDMI output port. - All features newer than HDMI 1.2 are cleared.

EDID Mode 1 (Switch 1=ON Switch2=OFF Switch5=ON) -Same as Mode 0 and adds basic audio support.

EDID Mode 2 (Switch 1=OFF Switch2=ON Switch5=ON) -Same as Mode 0 and adds full audio support.

EDID Mode 3 (Switch 1=ON Switch2=ON Switch5=OFF) -EDID is generated based on the common video and audio features of all of the connected output devices.

EDID Mode 4 (Switch 1=OFF Switch2=ON Switch5=OFF) -Same as Mode 3 and adds basic audio support.

EDID Mode 5 (Switch 1=ON Switch2=OFF Switch5=OFF) -Same as Mode 3 and adds full audio support.

EDID Mode 6 (Switch 1=OFF Switch2=OFF Switch5=OFF) **DEFAULT -EDID** is generated based on the common video features of all of the connected devices and the combined audio features of all of the connected output devices.

EDID Mode 7 (Switch 1=ON Switch2=ON Switch5=ON) -EDID is passed unmodified from the device connected to the first active output port.

EDID Mode 8 (Switch 1=OFF Switch2=OFF Switch5=OFF Switch7=ON) -Preloaded generic 1080p EDID is used.

EDID Mode 9 (Switch 1=ON Switch2=ON Switch5=OFF Switch7=ON) -Same as Mode 8 with modifications to limit HPD (hot plug detect) events.

Resolving Infrared Code Conflicts

In the event of IR conflicts, please do the following:

1. Remove the battery cover from the back of the RMT16-IR remote.

2. Locate the DIP Switches above the batteries.

3. Switch the DIP Switches on the RMT16-IR to any of the combinations pictured below.

4. DIP Switches 1 and 2 in the RMT16-IR infrared remote correspond with DIP Switches 3 and 4 inside the 4X4 HDMI Matrix respectively. Switch the DIP switches inside the 4X4 HDMI Matrix to match the same Remote Channel as the RMT16-IR.

5. The 4X4 Matrix is now set to a new IR Code.

Remote Channel 0:

Remote Channel 1:

Remote Channel 2:

Remote Channel 3:

RS-232 INTERFACE
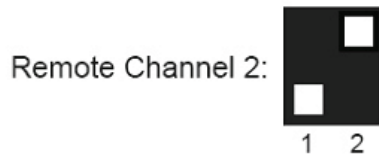
9 Pin Female   9 Pin Male
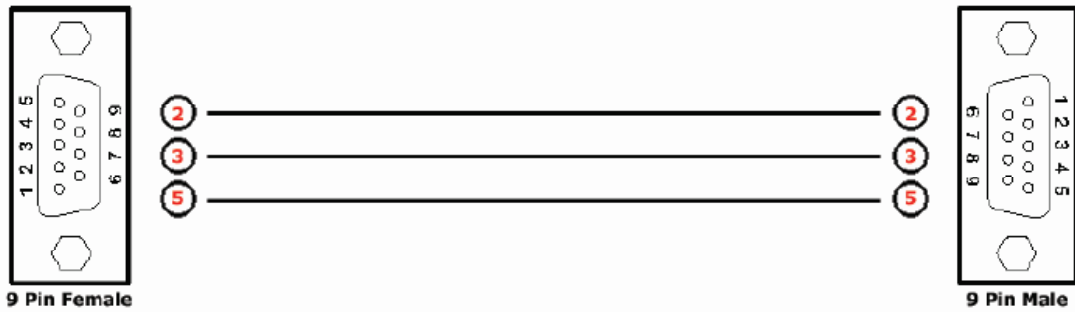
ASCII		Binary
1	1	0011 0001
2	2	0011 0010
3	3	0011 0011
4	4	0011 0100
5	5	0011 0101
6	6	0011 0110
7	7	0011 0111
8	8	0011 1000
9	9	0011 1001
a	10	0110 0001
b	11	0110 0010
c	12	0110 0011
d	13	0110 0100
e	14	0110 0101
f	15	0110 0110
g	16	0110 0111

RS232 Settings

Bits per second	19200
Data bits	8
Parity	None
Stop bits	1
Flow Control	None

4X4 HDMI RACK MOUNT DIAGRAM
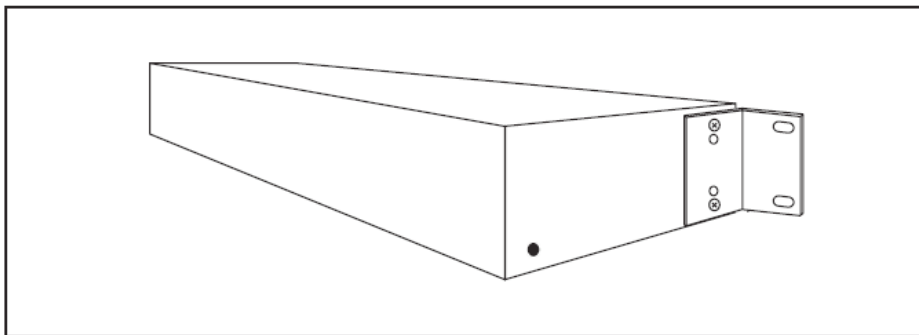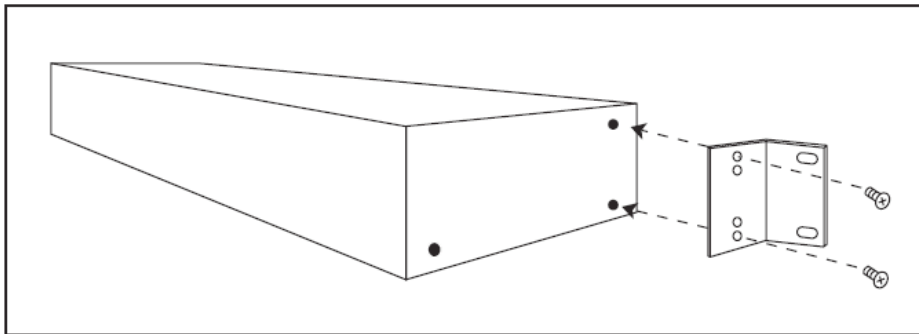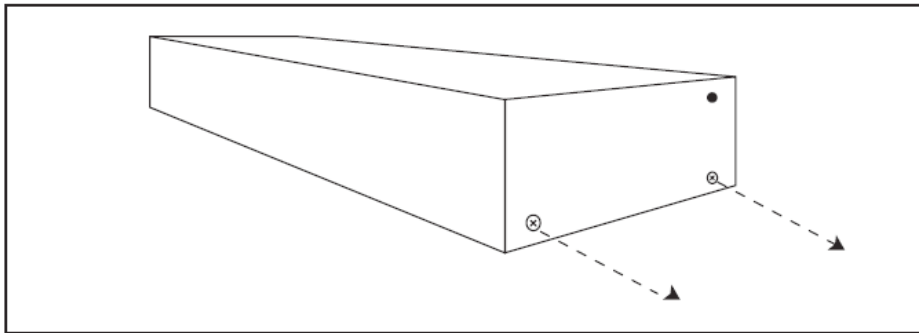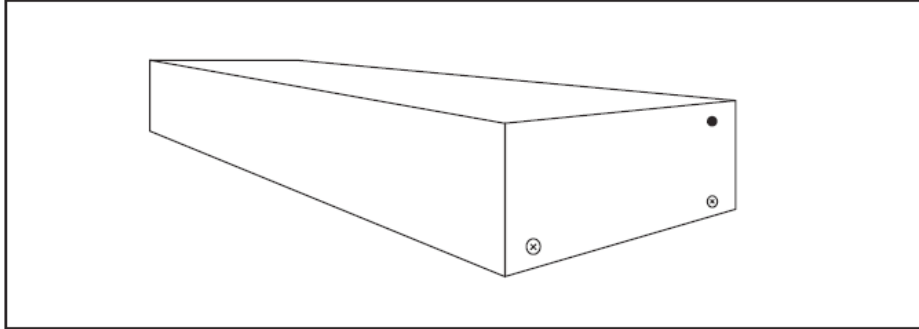
SPECIFICATIONS

Video Amplifier Bandwidth	1.65 Gbps
Input Video Signal	1.2 volts p-p
Input DDC Signal	5 volts p-p (TTL)
Single Link Range	1080p / 1920 x 1200
HDMI Input/Output Connector	Type A 19-pin Female
Remote Control Port	RS-232 Female, Mini-Stereo
Power Consumption	60 watts (max)
Power Supply	24V DC
Dimensions	17" W x 1.75" H x 5.875" D
Shipping Weight	10 lbs.

Technical Support

Hours: 7AM-5:30 PM PST
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